INDEX TO VOLUME XVI

New species in blackface type.

Abies spp., host for Phomopsis juniperovora, 900

Abnormalities, hereditary, in beans, 731–737

Abstracts, of papers read at the seventh annual meeting of the Canadian Division of the American Phytopathological Society, St. Catherines, Ontario, December 21–22, 1925, 755–759; of papers read at the tenth annual meeting of the Pacific Division of the American Phytopathological Society, Mills College, Oakland, California, June 16–19, 1926, 761–764

Acer, platanoides var. schwedleri, wilt of, 611

Acidity of other plants immune to crowngall, 504–506

Actinomyces, scabies, some factors affecting the pathogenicity of, 525

Agropyron, dasystachyum, host of Ophiobolus cariceti, 80–81; tenerum, smut of, 473

Albugo, 289; candida, 290–292

Alcoholic fermentation of Fusarium lini, 941

Alfalfa, crown wart of, in the South, 1012

Allium, white rot of, 697–710

Alternaria, causing rot of avocado, 80; facultative parasitism, 70; solani, cause of potato tuber rot, 68

Alternate hosts, effect on physiologic forms of Puccinia coronata, 83–84

American Phytopathological Society, abstracts of papers of Canadian Division, 755–759; abstracts of papers read before Pacific Division of, 761–764; report of seventeenth annual meeting, 647

Ammonia, injury of fruits and vegetables in storage, 73

ANDERSON, H. W., Control of bacterial spot of peach with sodium silicofluoride, 79–80; overwintering of Bacterium pruni (title), 55–57

Andropogon, trinii, host of Puccinia coronata, 83–84

Angular leaf spot, of cotton, 246

Anthracnose, of pepper (Capsicum annuum L.), 333–345; tropical, notes on, 762

Aphanomyces, euteiches, resistance of peas to, 459

Aplanobacter, dissolvens (comb. nov.), 264

Apple, black end of, 1011; black rot fungus, variability in, 41–46; crowngall and wound overgrowth on nursery stock, 765–809; effect of crowngall on young trees, 79; fire blight, epidemiology and control of, 665–696; fungi on bark of, 623; grafts, crowngall and callus overgrowths on, 78; hairy root of seedlings, 78; infections of roots by Armillaria mellea, 479; leafhopper injury to leaves, 76; leaves, leafhopper injury to, 413–423; rot caused by Botryosphaeria ribis f. chromogena, 45; scab, 449; scab, infection under controlled conditions, 77; tissue, Bacillus amylovorus in, 77; spot-rot of, in storage caused by Botrytis, 485

Apples, ammonia injury, 73; spot-rot of, in storage caused by Botrytis, 485

Armillaria mellea, infections of apple and prune roots by, 479

Ascochyta, 269–270, 271, 275, 276

Ascospore discharge of Venturia inequalis, 756

Aspergillus niger, cause of decay of cotton bolls, 75

Aster yellows, incubation period in its insect host, 67

ATANASOFF, D., Net necrosis of potato, 929; sprain or internal brown spot of potatoes, 711–722

Authority (for epiphytotic, etc.), 753–54

Avena, hookeri, susceptible to Ophiobolus cariceti, 80–81; sativa, host of Puccinia coronata, 83–84

Avocado, bacterial diseases, 235

Avocado fruit decay, 80; further studies on, 762
Azalea, pontica, 295, 296; genuinae, 296; viscosa, 295, 296

Bacillus, amylovorus, epidemiology and control, 665–696; amylovorus, migration and transformation in apple tissue, 77; carotovorus, 254; lathyri, inability to cause streak of tomato, 318, 328; phytophthorus, 151; secales, 263; coli, 254, 257, 259, 260, 265; zeae, 263
Bacterial, disease of bean, a new, 915; disease of corn, 263, 264; spot of peach, control with sodium silicofluoride, 79–80; stalk rot of corn, 241–267; wilt of beans, 1–22
Bacteriosis, of citrus fruits in South Australia, 80
Bacterium; dissolvens (comb. nov.), 264; flaccumfaciens Hedges, 1; **holci**, description of, 237; maculicolum, 877–884; phaseoli, 1; pruni, control with sodium silicofluoride, 79–80; pruni, overwintering of, 55–57; tumefaciens, causing hairy root of apple seedlings, 78; tumefaciens, effect on young apple and peach trees, 79; tumefaciens, inoculated into begonia, 491, 495, 500; tumefaciens, longevity in soil, 79; tumefaciens on apple, 765–809; tumefaciens on apple grafts, 78
BAILEY, ALICE A., see LINK, GEO. K. K.
BAILEY, D. L., and J. H. CRAIGIE, Studies on epidemiology of wheat stem rust in Manitoba, 755; and F. J. GREANEY, Preliminary experiments on the control of leaf and stem rusts of wheat by sulphur dust, 64
Banana, ammonia injury, 73; Colorado disease, 371–392; wilt disease on the island of Singapore, 369–370
Barberry, alternate host for Puccinia graminis tritici, 234
BARKER, HENRY D., Fruitlet black rot disease of pineapple, 359–363
Barley, covered smut, experiments in the control of, 347–351; cross between, for resistance to Helminthosporium californicum, 764; loose smut control, 63–64; stripe, control by use of organic mercury compounds, 63–64
Bayer No. 3, dust, for control of wheat bunt, 349
Bean, a new bacterial disease of the, 915
Beans, bacterial wilt, 1–22; hereditary abnormalities, 731–737; inhibiting tobacco mosaic virus, 67–68
Beets, sugar, curly-top of, 761; sugar, resistance to curly top, 87–88
Begonia, immune to crowngall, 491
Berberis, fendleri, alternate host of Puccinia graminis tritici, 234; vulgaris, inoculations on, 235
Berchemia scandens, susceptible to Puccinia coronata II, 84
BERKELEY, G. H., and A. B. JACKSON, Verticillium "wilt" of raspberry, 755–756
BETHEL, ELLSWORTH, 662
Biochemistry of plant diseases, 941
Bioluminescence of Omphalia flavida, 63
"Black dot" disease of potato, 23–40
Black end of apple, 1011
Black leaf, of peas caused by Fusicladium pisicola n sp., 549–558
Blackleg, potato, 149, 246; relation of seed-corn maggot, 68, 149
Black pit, of citrus, caused by bacteria, 235; of lemon in South Australia, 80
Black rot, fungus of the apple, variability in, 41–46; of cabbage, 246–247; of pineapple fruitlets, 359–363
Blast, of citrus caused by bacteria, 235
Blight, celery, controlling in seedbed, 467; western yellow tomato, 763; winter, of tomato in Quebec, 311–331
BLIZZARD, ALPHEUS WESLEY, nuclear phenomena and life history of Urocystis cepulae, 69
Blossom blight, peach, 217
BOLLEY, H. L., The 1925 summer field meeting—cereal disease conference, 237–240
BONDE, REINER, see GRATZ, L. O.
Botrytis cinerea, spot-rot of apples in storage caused by, 485; on potato, 754
Botryosphaeria ribis f. chromegena G. and D., causing rot of apple, 45

BOYD, C. C., Control of watermelon anthracnose, 641; pecan scab control, 644
Brassicae pe tsai, 310
Breeding lettuce for tip-burn resistance, 764
BREWER, P. H., JAMES B. KENDRICK and MAX W. GARDNER, Effect of mosaic on carbohydrate and nitrogen content of the tomato, 843–852
BRIGGS, FRED N., Seed treatments for the control of bunt of wheat, 829–842; see MACKIE, W. W., 629
BROADFOOT, W. C., Studies on the parasitism of Fusarium lini, 951; ———, and E. C. STAKMAN, Physiologic specialization of Fusarium lini Bolley, 84–85
Bromus, inermis, host of Ophiobolus cariceti, 80–81; inermis, host of Puccinia coronata, 89–84; latiglumis, host of Ophiobolus cariceti, 80–81; porteri, host of Ophiobolus cariceti, 80–81
BROOKS, A. N., Studies of the epidemiology and control of fire blight of apple, 665–696
Brown-patch control, 76
Brown spot, internal, of potatoes, 711–722
Bunchy-top, of Manila hemp (Musa textilis), 894
Bunt, of wheat and smuts of barley and oats, further experiments in the control of, 347–351; of wheat, seed treatments for the control of, 829–842
BULLER, A. H. R., and T. C. VANTERPOOL, The bioluminescence of Omphalia flavida, a leaf-spot fungus, 63
BURKHOLDER, W. H., A new bacterial disease of the bean, 915; and ALBERT S. MULLER, Hereditary abnormalities resembling certain infectious diseases in bean, 731–737
Burrill's bacterial disease of corn, 263
BUTLER, L. F., see RAMSEY, G. B.

Cabbage, attack on heads by Peronospora parasitica, 365–366; black rot of, 245–246; Copenhagen market resistant to yellows, 72; Glory of Enkhuizen selection resistant to yellows, 62–73; inheritance of Fusarium-resistance, 87
Caenothus americanus, susceptible to Puccinia coronata II, 84
Calamagrostis canadensis, host of Puccinia coronata, 83–84
California, bacterial diseases of avocado, lilac, and citrus in, 235; verticillium wilt of tomatoes in, 234
Callosities, result of fungous infection, 70
Callus overgrowths on apple grafts, 78
Canadian division of American Phytopathological Society, abstracts of papers, 755–759
Capsicum annuum, L., anthracnose of, 333–345; inoculations with mosaic diseases, 144
Carbon dioxide, influence on growth of Ophiobolus graminis, 81
CARLETON, MARK ALFRED, 663
Carrots, Rhizoctonia crown rot of, 367–368
CARSNER, EUBANKS, resistance in sugar beets to curly-top, 87–88
Cauliflower, spot disease of (Bacterium maculicolum), 877–884
Chlorosis, cold, of sugar cane, 885–892
Celery blight, controlling in seed bed, 467
Cephalatoxus drupacea, host for Phomopsis juniperovora, 900
Cephalosporium acremonium, infection phenomena, 70
Cereal, crops, the fusariosis of cereal crops in European Russia in 1923, 305–308; disease, conference on, 237; rusts, dusting for, 64; smuts, control of, 645
Chaetochloa lutescens, bacterial spot, 236; magna, downy mildew on, 71
Chamaecyparis spp., hosts for Phomopsis juniperovora, 900
Chemical injury to watermelons in transit, 73
Chestnut, basal shoots from blighted, 615; blight of, in Southern Appalachians, 643
Chinese cabbage, occurrence of club root on, 310
Chloroplasts, destruction of, in tomato mosaic, 66–67
CHRISTENSEN, J. J., The relation of soil temperature and soil moisture to the development of head smut of sorghum, 353–357; see STAKMAN, E. C.

Cicadula sexnotata, injury to apple leaves, 76; insect host of aster yellows, 67
Citrus, bacterial diseases of, 235; bacteriosis in South Australia, 80
Cladosporium, causing rot of avocado, 80; saprophyte on pea vines, 555
CLEMMER, H. J., see TISDALE, W. H.
Clover, host of Colletotrichum trifolii and Gloeosporium caulivorum, 71–72
Colletotrichum atramentarium, cause of "black dot" disease of potato, 23–40; gloeosporioides, causing rot of avocado, 80; lindemuthianum, physiologic forms of in the Netherlands, 369; nigrum, infection phenomena, 70; description of, 340; omnivorum, possible identity with Colletotrichum sp. associated with anthracnose on pepper, 340; sp., description of, 340; spp., associated with anthracnose of peppers, 333–344; trifolii on clover, 71–72
Colloidal sulphur, for control of covered smut of barley, 350; for control of oat smuts, 350, 351; for control of wheat bunt, 349
Colorado banana disease, 371–392
Conference, cereal diseases, 237
Conidia, dispersal of in Venturia inequalis, 756
CONN, H. J., Stain technology, 579–580
CONNERS, I. L., Organic mercury compounds for the control of loose smuts of wheat and barley and barley stripe, 63–64
COOK, MEL T., Studies on Helminthosporium sacchari on sugar cane in Porto Rico, 71
COOLEY, J. S., and E. ALINE FENNER, The variability in the black rot fungus of the apple, 41–46
Control, of covered smut of barley, 347–351; of fire blight, 665–696; of leaf and stem rusts of wheat by sulphur dust, 64; of loose smuts of wheat and barley and barley stripe, 63–64; of onion smut, 758; of Peronospora parasitica, 366; of Rhizoctonia, potato, 755; of smuts of oats, 347–351; of bunt of wheat, 347–351
Controlling celery blight in seedbed, 467
Copper carbonate dust, for control of wheat bunt, 349–351
Copper sulphate, dust, for control of wheat bunt, 349; solution, for control of wheat bunt, 349; solution, for control of oat smuts, 350, 351; solution, for control of covered smut of barley, 350
Copper stearate, dust, Corona, for control of wheat bunt, 349
Corn, bacterial spot, 236; bacterial stalk rot, 241–267; bacterial stem rot, 242; cob discoloration in, 639; cob discoloration, 207; dent, Pythium seedling blight and root rot of, 85; influence of temperature on metabolism of, 82; influence of temperature on resistance to seedling blight in, 82; relation of internal cob discoloration to yield, 207; rust, 84, infection and spore germination studies, 69; Sclerospora graminicola on, 85–86; seed corn maggot, relation to potato blackleg, 68; seed treatment, 82–83; smut, 84; sweet, seed treatment, 65; Ustilago zeae on, 979
Corona 640-S, for control of covered smut of barley, 350; for control of oat smuts, 350–351; dust, for control of wheat bunt, 349
Corrosive sublimate and time of treatment in relation to yield and control of Rhizoctonia, 755
Cotton, angular leaf spot, 246; Aspergillus boll rot, 75; sore-shin, 761; wilt studies, 76
Cottony leak of eggplant fruit caused by Pythium aphanidermatum, 47–50
CRAIGIE, J. H., see BAILEY, D. L.
Cranberry false blossom, distribution of, 223–224; conditions on Pacific coast, 226; situation in Wisconsin, 225; varietal resistance, 227
Cross-inoculated mosaic plants, properties of infective principles in, 445
Crowngall, a begonia immune from, 491; on apple grafts, 78; effect on young apple and peach trees, 79; isolation of causal organism, 577; longevity of causal organism in soil, 79; studies of on apple nursery stock, 765–809

Crown, rot of carrots caused by Rhizoctonia, 367–368; wart of alfalfa in the South, 1012
Cryptomeria japonica, host for Phomopsis juniperovora, 900
Cucumber, inhibiting tobacco mosaic virus, 67–68; mosaic of, 431
CUNNINGHAM, G. H., Fungous diseases of fruit trees in New Zealand and their remedial treatment, review of, 489
Curly-top, disease of sugar beets, cytology of root-tips of, 761; of sugar beets, resistance to, 87–88
Cupressus spp., hosts for Phomopsis juniperovora, 900
Cylindrocarpon angustum Wollenweber, n. sp., 627
Cylindrocarpon, species on Pyrus, 627
Cytology of root-tips from sugar beets having the curly-top disease, 761

Datura, stramonium, inoculations with tobacco mosaic, 145
DEARNESS, J., Some fungous foes of the flower garden, 756
Decays, fruit, avocado, 762
DEBRUYN, HELENA L. G., Overwintering of Phytophthora infestans (Mont.) de By., 121–140
Degeneration disease, of strawberry, 423–426
DEMAREE, J. B., Little leaf disease of pecans, 277–283; pecan scab fungus, 642
Device for increasing the capacity of moist chambers, 309–310
DICKSON, B. T., The "black dot" disease of potato, 23–40
DICKSON, JAMES G., see JOHANN, HELEN; and JAMES R. HOLBERT, The influence of temperature upon the metabolism and expression of disease resistance in selfed lines of corn, 82
DIETZ, S. M., Alternate hosts of Puccinia coronata II, 84; the effect of alternate hosts on physiologic forms, 83–84
Diplodia, dry rot fungus, 245; natalensis, causing rot of avocado, 80; zeae, as affected by corn seed treatment, 82–83; zeae, facultative parasitism, 70; zeae, infection phenomena, 70
Disease, conference on cereal, 1925, 237; spindle tuber in potatoes, 233
Diseases, bacterial of avocado, lilac, and citrus in California, 235; bacterial, similarity of on avocado, lilac and citrus, 235; new and unusual, of tobacco, 758
Disinfection of seed for corn diseases, 82–83
DOUNIN, M., The fusariosis of cereal crops in European Russia in 1923, 305–308
DRAYTON, F. L., Dry rot disease of gladioli, 757
DRECHSLER, CHARLES, Foot-rot of Lilium candidum and Lilium pyrenaicum caused by Phytophthora cactorum, 51–53; the cottony leak of eggplant fruit caused by Pythium aphanidermatum, 47–50
Dry rot, of gladiolus, 509, 757
DUNEGAN, J. C., see ROBERTS, J. W.
Dupont, No. 9, dust, for control of wheat bunt, 349; No. 12, dust, for control of wheat bunt, 349; No. 13, dust, for control of wheat bunt, 349; No. 16, dust, for control of wheat bunt, 349; No. 18, dust, for control of wheat bunt, 349; No. 19-B, dust, for control of wheat bunt, 349; No. 30, dust, for control of wheat bunt, 349
DURRELL, L. W., and E. A. LUNGREN, Berberis fendleri, an alternate host of Puccinia graminis tritici, 234–235
Dust, sulfur, effect on black stem rust of wheat, 64–65; sulphur, as a control for wheat rusts, 64; treatments, for control of stripe disease of barley, 572
Dusting, for cereal rusts, 64
Dutch investigations, 310

EDSON, H. A., Work of Office of Cotton, Truck and Forage Crop Disease Investigations, 641
Eggplant, cottony leak of fruit caused by Pythium aphanidermatum, 47–50
Elaeagnus, angustifolia, susceptible to Puccinia coronata II, 84
Éléments de Pathologie Végétale, appliquée a l'Agronomie et a la Sylviculture, by E. MARCHAL, review of, 59–61
Elm, Verticillium wilt of seedlings, 611

ELMER, O. H., Inhibition of mosaic infection, 67–68
Elymus innovatus, host of Ophiobolus cariceti, 80–81
Empoasca flavescens, injury to apple leaves, 76; mali, injury to apple leaves, 76
Endothia, parasitica, 615
Environment, influence of, on potato mosaic symptoms, 581
Epidemiology of fire blight, 665–696
"Epiphytotic," etc., authority for, 753–754
ERWIN, A. T., see REDDY, C. S.; see VAN HALTERN, FRANK
Erysiphe, cichoracearum on cucurbits, 1009; graminis tritici, resistance of wheat varieties to, 90
Eutettix tenella, carrier of beet curly top, 87–88
EVANS, W. G., see HOWITT, J. E.
Exobasidium, caucasicum Woronich. in Transcaucasia and Kamchatka, 293–297; spp., 293, 295, 296; oxycocci, on Vaccinium oxycoccus, 224

Factors affecting the properties of a virus, 753
False blossom, cranberry, 223
FARIS, JAMES A., Cold chlorosis of sugar cane, 885–892
FELLOWS, MURLEY, The influence of carbon dioxide and oxygen on the growth of Ophiobolus graminis in pure culture, 81
FENNER, E. ALINE, see COOLEY, J. S.
Fermentation, alcoholic, of Fusarium lini, 941
Festuca, elatior, host of Puccinia coronata, 83–84, 84; interrupta, host of Puccinia coronata, 83–84
Feterita, not susceptible to sorghum kernel smut, 85
Forms, physiologic, of Colletotrichum lindemuthianum in the Netherlands, 369
Fire blight, of apple, epedimiology, and control, 665–696; of pear, 253
FITCH, H. W., Revised method for the quantitative determination of sulphur fungicides on foliage, 427–428
Flax, Fusarium lini on, 951; inheritance of immunity from Melampsora lini, 87
Flax rust, development of, 185; effect of soil nutrients on infection, 197; factors affecting, 185; factors affecting length of incubation, 194; histological relations, 198
Flax wilt, 84–85
FLOR, H. H., see LAMBERT, E. B.
Flower garden, fungous foes of, 756
Flowers of sulphur, for control of wheat bunt, 349
Fomes pinicola Fr., preliminary note on, 757–758
Footrot, caused by Ascochyta sp. and some other fungi, 269; of peas, 269; of Lilium candidum and Lilium pyrenaicum caused by Phytophthora cactorum, 51–53; of wheat, effect of tillage, fertilizers, and rotations on, 81
Formaldehyde, for control of cereal smuts, 349, 350, 351
Foxtail, bacterial spot, 236
FRASER, W. P., and G. A. SCOTT, Smut of western rye grass, 473; P. M. SIMMONDS and R. C. RUSSELL, The take-all disease in Canada, 80–81
FROMME, F. D., Susceptibility of wheat varieties and selections to loose smut, 86–87
Fruit decays, avocado, 762
Fruit trees, diseases of, in New Zealand and their remedial treatment, 489
Fruitlet black rot disease of pineapple, 359–363
Fungi ,mutations in, 762–763
Fungicides, the effectiveness of, in controlling the covered smuts of small grains, 393–411; sulphur, quantitative determination on foliage, 427–428
Fungous, foes of flower garden, 756; diseases of fruit trees in New Zealand and their remedial treatment, 489
Fusaria, 305, 306, 307, 308; causing bulb-rot of onions, 74–75
Fusariosis of cereal crops in European Russia in 1923, the, 305–308
Fusarium, 260; bulbigenum Cke. and Mass. on onion bulbs, 74–75; causing rot of

avocado, 80; cepae Hanz. causing bulb-rot of onions, 74–75; conglutinans, Copenhagen market cabbage resistant to, 72; conglutinans, inheritance of resistance to, 87; inoculation experiments, 371–392; lini, 307; lini, alcoholic fermentation of, 941; lini, physiologic specialization in, 84–85; lini, studies on the parasitism of, 951; martii Appel and Wr. on onion bulbs, 74–75; martii var. pisi, 269–270, 276; moniliforme, as affected by corn seed treatment, 82–83; moniliforme Sheld. on onion bulbs, 74–75; oxysporum Schlecht. on onion bulbs, 74–75; oxysporum, var. gladioli, causing rot of gladiolus, 511–523; rot, of gladiolus corms, 509–523; roseum on rye, 305–308; special form, 307; spp., 247; species on Pyrus, 625; three undetermined species associated with pea wilt, 75; vasinfectum Atk. on onion bulbs, 74–75; vasinfectum causing cotton wilt, 76; vasinfectum, in tomatoes, 234; vasinfectum, 234; zonatum Sh. causing bulb-rot of onions, 74–75

Fusarium-infection, 306, 307

Fusarium-resistance in cabbage, inheritance of, 87

Fusarium-resistant cabbage (Glory of Enkhuizen selection), 72–73

Fusicoccum putrefaciens, on cranberries, 224

Fusicladium, brevipes, on Astragalus, 553; effusum, 642; **pisicola** n. sp., causing black-leaf of peas, 549; on peas (two species), 553

Gall, aerial, of quince, 78

GARDNER, MAX W., see BREWER, P. H.

Gentiana, 295

Germisan, for control of covered smut of barley and oat smuts, 350, 351

Gibberella, saubinetii, as affected by corn seed treatment, 82–83; species on Pyrus, 625

GILBERT, W. W., An improved method for isolation of Thielavia basicola, 579; and F. C. MEIER, Chemical injury to watermelons in transit, 73

GILCHRIST, GRACE G., The nature of resistance to footrot caused by Ascochyta sp. and some other fungi in the epicotyl of the pea, 269–276

Gladiolus, Fusarium corm rot, 509–523; dry rot disease of, 757

Gloeosporium, caulivorum on clover, 71–72; piperatum, as cause of anthracnose of peppers, 334–335, 339–344; piperatum, description of, 340; piperatum, overwintering of, 342–343; spp., associated with anthracnose of peppers, 333–344

Glomerella, cingulata, on privet, correction in nomenclature, 428; **glycines**, n. sp., 640; piperata, association with anthracnose of peppers, 335; piperata, description of, 340–341; sp., description of, 341; spp., associated with anthracnose of peppers, 335–336, 338–344

Gnomoniopsis piperata, probable identity with Glomerella piperata, 341

GOLDSWORTHY, M. C., Attempts to cultivate the tobacco mosaic virus, 873–876; Studies on the spot disease of cauliflower, 877–884

GOSS, R. W., A simple method of inoculating potatoes with the spindle-tuber disease, 233; Transmission of potato spindle-tuber by cutting knives and seed piece contact, 68–69, 299–303

GRANOVSKY, A. H., Studies on leafhopper injury to apple leaves, 76, 413–423

GRASS, JOHNSON, bacterial spot of, 236; western rye, smut of, 473

GRATZ, L. O., and REINER BONDE, Alternaria tuber rot of potatoes, 68

GRAVATT, G. F., The chestnut in Southern Appalachians, 643

GRAVES, ARTHUR HARMOUNT, Basal shoots from blighted chestnut trees, 615

GREANEY, F. J., see BAILEY, D. L.

GRIER, N. M., Device for increasing the capacity of moist chambers, 309–310

Ground cherry mosaic, properties of infective principle, 441

GUBA, E. F., Injury to glasshouse plants from hydrocyanic acid gas, 633

HAHN, GLENN GARDNER, Phomopsis juniperovora and closely related strains on conifers, 899
Hairy root of apple seedlings, 78
HANSEN, H. N., Single spore isolation simplified, 763
Hard rot, of gladiolus, 509
HART, HELEN, Factors affecting the development of flax rust, Melampsora lini (Pers.) Lev., 185–205
Head smut, of sorghum, relation of soil temperature and soil moisture to development of, 353–357
Heads, of cabbage, attacked by Peronospora parasitica, 365–366
HEALD, F. D., and R. SPRAGUE, Spot-rot of apples in storage caused by Botrytis, 485
HEDGES, FLORENCE, Bacterial wilt of beans (Bacterium flaccumfaciens Hedges), including comparisons with Bacterium phaseoli, 1–22
Hegari, susceptible to strain of sorghum kernel smut, 85
Helminthosporium, californicum, inheritance of resistance to in barley crosses, 764; gramineum, causing stripe disease of barley, 565; gramineum, facultative parasitism, 70; infection phenomena, 70; sacchari on sugar cane, 71
HENRY, A. W., Inheritance of immunity from Melampsora lini, 87
Hereditary abnormalities resembling certain infectious diseases in beans, 731–737
HESLER, L. R., Rev. of: Éléments de Pathologie Végétale, appliquée a l'Agronomie et a la Sylviculture, by E. MARCHAL, 59–61; Teaching elementary plant pathology, 739–744
Heterodera radicicola, galls on begonia, 491; paradichlorobenzene against, 635
HIGGINS, B. B., Anthracnose of pepper (Capsicum annuum L.), 333–345
HOLBERT, JAMES R., CHAS. S. REDDY, and BENJAMIN KOEHLER, Seed treatments for the control of certain diseases of dent corn, 82–83; see DICKSON, JAMES G.; see JOHANN, HELEN
Holcus, bacterial spot, 236; halepensis, bacterial spot, 236; sorghum, bacterial spot, 236; sorghum var. sudanensis, bacterial spot, 236
Hordeum, distichum (Hordeum deficiens) for resistance, 764; murinum, host of Puccinia coronata, 83–84
HORNE, WM. T., Further studies on avocado fruit decays, 762; Notes on some tropical anthracnoses, 762; Preliminary notes on avocado fruit decay, 80
HOWE, MARY F., Changes in hydrogen-ion concentration induced by carbon dioxide in relation to the germination of spores of Ustilago levis, 69–70
HOWITT, J. E. and W. G. EVANS, Corrosive sublimate and time of treatment in relation to yield and control of Rhizoctonia, 755; Preliminary report of some observations on ascospore discharge and dispersal of conidia of Venturia inequalis (Cooke) Winter, 559–563; Some observations on ascospore discharge and dispersal of conidia of Venturia inequalis, 756
Hydrocyanic acid gas, injury to glasshouse plants, 633
Hydrogen-ion concentration, changes induced by carbon dioxide, 69–70
Hylemyia trichodactyla, 55
HYNES, H. J., Studies on the reaction to stem rust in a cross between Federation wheat and Khapli emmer, with notes on the fertility of the hybrid types, 809–829

Immunity, from Melampsora lini, inheritance of, 87
Infections of apple and prune roots by Armillaria mellea, observations on, 479
Influence of soil temperature and soil moisture upon white rot of Allium, 697–719
Inheritance, of immunity from Melampsora lini, 87; of resistance to Helminthosporium californicum in a cross between Chevalier barley, a resistant variety, and Abyssinian, a susceptible variety, 764; of Fusarium-resistance in cabbage, 87

Inoculation of wheat varieties with Puccinia triticina, 90–94
Insect host of aster yellows, 67
Internal brown spot of potatoes, 711–722
International problems in plant pathology, an invitation, 233
Isolation, single spore simplified, 763

JACKSON, A. B., see BERKELEY, G. H.
JACKSON, H. S., see MAINS, E. B.
JAGGER, IVAN C., Powdery mildew of muskmelons in the Imperial Valley of California in 1925, 1009
JEHLE, R. A., F. W. OLDENBURG, and C. E. TEMPLE, Relation of internal cob discoloration to yield in corn, 207–215; Selection for freedom from internal cob discoloration in corn, 639
JOHANN, HELEN, J. R. HOLBERT and JAMES G. DICKSON, A Pythium seedling blight and root rot of dent corn, 85
JOHNSON, JAMES, Mosaic diseases on differential hosts, 141–149; New virus disease of tobacco and related plants, 66; Some points of view on the plant virus problem, 745–751
JOHNSTON, JOHN R., Banana wilt disease on the island of Singapore, 369–370
JONES, FRED R., Resistance of peas to root-rot, 459
JONES, PHILIP M., A mycetozoan found in tobacco plants with mosaic-like symptoms, 67
Juniperus spp., list of species affected by Phomopsis juniperovora, 899–900

Karasch Compound A and B dusts, for control of wheat bunt, 349
KEITT, G. W., Studies of apple scab infection under controlled conditions, 77; see RIKER, A. J.; and E. E. WILSON, Studies on the development of the ascigerous stage of Venturia inaequalis in nature, 77
KENDRICK, J. B., Holcus bacterial spot on species of Holcus and Zea mays, 236–237; see BREWER, P. H.
KIGHTLINGER, C. V. and H. H. WHETZEL, Second report on dusting for cereal rusts, 64
KOEHLER, BENJAMIN, see HOLBERT, JAMES R.
KUNKEL, L. O., Incubation period of aster yellows in its insect host, 67

LAMBERT, E. B., and E. C. STAKMAN, Effect of sulfur dust on the development of black stem rust of wheat in a natural epidemic, 64–65; et al, The effectiveness of various fungicides in controlling the covered smuts of small grains, 393–411
Larix spp., hosts for Phomopsis juniperovorus, 900
Lawns, brown-patch control, 76
LEACH, J. G., The relation of the seed-corn maggot to potato blackleg, 68; The relation of the seed-corn maggot (Phorbia fusciceps Zett.) to the spread and development of potato blackleg in Minnesota, 149–175
Leafhopper injury to apple leaves, 76, 413–423
Leaf rust of wheat, control by sulphur dust, 64
Leaf spot, angular, of cotton, 246; luminous, due to Omphalia flavida, 63
Leguminosae, species attacked by Peronospora trifoliorum, 72
Leak, cottony, of eggplant fruit caused by Pythium aphanidermatum, 47–50
LEHMAN, S. G., and F. A. WOLF, Pythium root rot of soybean, 640; soybean anthracnose, 740; see WOLF, F. A.
Lemon black pit in South Australia, 80
LEONIAN, LEON H., Morphology and pathogenicity of some Phytophthora mutations, 723–730
LETCHER, HOUSTON and J. J. WILLAMAN, Biochemistry of plant diseases VIII, 941
Lettuce, breeding for tip-burn resistance, 764
LEUKEL, R. W., Further experiments on the control of bunt of wheat and the smuts of barley and oats, 347–351; JAMES G. DICKSON and A. G. JOHNSON, Seed treatment for controlling stripe disease of barley, 565–576

LEWCOCK, H. K., A citrus bacteriosis occurring in South Australia, 80
Lilac, bacterial disease of, 235
Lilium, candidum, foot-rot of, 51–53; pyrenaicum, foot-rot of, 51–53
LINK, GEO. K. K. and ALICE A. BAILEY, Fusaria causing bulb-rot of onions, 74–75
Linum usitatissimum, Fusarium lini on, 952; immunity from Melampsora lini, 87
Liquid treatments, for control of stripe disease of barley, 569
LINFORD, MAURICE B., A wilt disease of peas in Wisconsin, 75; Black-leaf of peas caused by Fusicladium **pisicola** n. sp., 549–558
Little leaf, in apple and pear, 277, 278, 279, 281; disease of pecans, 277–283
Lolium substratum, host of Puccinia coronata, 83–84
Lonicera flava, susceptible to Puccinia coronata, 84
Loose smut, of barley, control by use of organic mercury compounds, 63–64; of wheat, susceptibility of varieties and selections to, 86–87; of wheat, control by use of organic mercury compounds, 63–64
LUDWIG, C. A., Pseudomonas (Phytomonas) pisi Sackett, the cause of a pod spot of garden peas, 75, 177–184
Lycopersicon esculentum, inoculations with mosaic diseases, 144

MACKIE, W. W., Inheritance of resistance to Helminthosporium californicum in a cross between Chevalier barley, a resistant variety, and Abyssinian, a susceptible variety, 764; and FRED N. BRIGGS, Effects of wheat treated with copper carbonate upon common house mouse, 629
Macrosporium, infection phenomena, 70
Maggot, seed-corn, relation to potato blackleg, 68
MAINS, E. B. and H. S. JACKSON, Physiologic specialization in the leaf rust of wheat, Puccinia triticina Erikss., 89–120
Maple, Verticillium wilt of seedlings, 611
MASSEY, L. M., Fusarium rot of gladiolus corms, 509–523
MCCLINTOCK, J. A., Aerial galls of quince, 78
MCKINNEY, H. H., Virus mixtures that may not be detected in young tobacco plants, 893; Factors affecting the properties of a virus, 753; and R. W. WEBB, The dilution method as a means for making certain quantitative studies of viruses, 66
Medicago, lupulina, host of Peronospora trifoliorum, 72; sativa, host of Peronospora trifoliorum, 72
MEER, JIKKE H. H. VAN DER, Verticillium wilt of maple and elm seedlings, 611
MEIER, F. C., see GILBERT, W. W.
Melampsora lini, 185; factors affecting germination, 186; inheritance of immunity from, 87; on flax, 185; physiological specialization, 199; vitality of spores, 190
MELCHERS, LEO E., and M. C. SEWELL, The effect of tillage, fertilizers and rotations on the spread of wheat foot-rot, 81; see TISDALE, W. H.
MELHUS, I. E., A wound dressing for plants, 79; and FRANK VAN HALTERN, Sclerospora graminicola on corn, 85–86; see WHETZEL, H. H.
Mercury, organic mercury compounds for the control of loose smuts of wheat and barley and barley stripe, 63–64
Method, an improved, of isolating Pseudomonas tumefaciens Sm. and Town., 577
Mildew, downy, on Everglade millet, 71
Millet, Everglade, downy mildew on, 71; pearl, bacterial spot, 236; susceptible to Sclerospora graminicola, 85–86
Milo, susceptible to strain of sorghum kernel smut, 85
Minnesota, black leg in, 149
MIX, A. J., correction in nomenclature of Glomerella cingulata, 429
Moist chambers, device for increasing the capacity of, 309–310
Moisture, effects on Phytophthora infestans, 135; of soil, relation to development of head smut of sorghum, 353–357

MONTEITH, JOHN, JR., Colletotrichum trifolii and Gloeosporium caulivorum on clover, 71–72; Control of brown-patch in turf, 76; see WALKER, J. C.

Morphology and pathogenicity of some Phytophthora mutations, 723–730

MORREN, CH., 753

Mosaic, cross inoculations with cucumber mosaic, 144; cross inoculations with "mild" tobacco mosaic, 144; cross inoculations with ordinary tobacco mosaic, 144; cross inoculations with Petunia mosaic, 144; cross inoculations with "speckled" tobacco mosaic, 144; diseases on differential hosts, 141–149; diseases, differential symptoms of, 143–145; effect on carbohydrate and nitrogen content of the tomato, 843–852; incubation periods of, 143; infection, inhibition of, 67–68; mycetozoan in tobacco plants with mosaic-like symptoms, 67; of cucumber, tomato and Physalis, a comparative study, 431; potato, influence of environment on symptoms, 581; of potato, relation to streak or winter blight of tomato, 326–330; tobacco, attempts to cultivate virus, 873–876; tobacco, nature of virus, 853–872; of tomato, causing destruction of chloroplasts, 66–67; of tomato, relation to streak or winter blight of tomato, 326–330; of sweet potato, incubation period, 74; of sweet potato, non-transmissibility, 74; viruses, studies by dilution method, 66; virus mixtures in tobacco, 893; new, of tobacco and related plants, 66

Mouse ear, known locally in southern Mississippi, 277

MOUNCE, IRENE, A preliminary note on Fomes pinicola Fr. and Pholiota adiposa Fr.—two heterothallic species of wood-destroying fungi, 757–758

MULLER, ALBERT S., see BURKHOLDER, WALTER H.

MULLER, H. R. A., Physiologic forms of Colletotrichum lindemuthianum (Sacc. et Mag.) Bri. et Cav. in the Netherlands, 369

MULVANIA, MAURICE, Studies on the nature of the virus of tobacco mosaic, 853–872

MUNCIE, J. H., Hairy root of apple seedlings, 78; The effect of crowngall on young apple and peach trees and longevity of Bacterium tumefaciens in the soil, 79

Mus musculus, effect of copper carbonate upon, 629

Musa textilis, bunchy-top of, 894

Muskmelons, powdery mildew of in the Imperial Valley of California in 1925, 1009

Mutation, in Ustilago zeae, 979

Mutations in fungi, 762–763

Mycetozoan, Plasmodiophora **tabacum** n. sp., in tobacco plants with mosaic-like symptoms, 67

Nectria, species on Pyrus, 623

Nematode, paradichlorobenzene against, 635

Netherlands, physiologic forms of Colletotrichum lindemuthianum in, 369

Net necrosis of potato, 929

NEWHALL, A. G., Controlling celery blight in seedbed, 467

New Zealand, diseases of fruit trees in, and their remedial treatment, 489

Nickel carbonate, dust, for control of wheat bunt, 349

Nicotiana, glauca, inoculations with mosaic diseases, 144; glutinosa, inoculations with mosaic diseases, 144; rustica, inoculations with mosaic diseases, 144; tabacum, inoculations with mosaic diseases, 144; tabacum, new virus disease, 66

NIXON, E. L., Migration and transformation of Bacillus amylovorus in apple tissue, 77

Nomenclature, of leaf rusts, 114–117

Notes, on some tropical anthracnoses, 762; phytopathological, 233

Nothoholcus lanatus, susceptible to Puccinia coronata avenae, 83

Nuclear phenomena in Urocystis cepulae, 69

Oats, crown rust of, 83, 84; smuts, experiments in the control of, 347–351
Occurrence of club root on Chinese cabbage, 310
OCFEMIA, G. O., Progress report on bunchy-top of abaca or Manila hemp, 894
OLDENBURG, F. W., see JEHLE, R. A.
Omphalia flavida, bioluminescence of, 63
Onion, Fusarium bulb-rots, 74–75; smut experiments for control of, 758; smut, nuclear phenomena and life history, 69; white rot of, 697–710
Onions, ammonia injury, 73
Ophiobolus, graminis, influence of carbon dioxide and oxygen on growth of, 81; cariceti on Torresia odorata and Bromus spp. in Canada, 80–81
Overwintering; of Bacillus amylovorus, 666–673; of Bacterium pruni, 55–57; of Phytophthora infestans, 121–140
Oxygen, influence on growth of Ophiobolus graminis, 81
Oxalis, species, infection with Puccinia sorghi, 69

Pacific division of the American Phytopathological Society, titles and abstracts of papers of annual meeting, 761–764
Paradichlorobenzene, use of, against nematode, 635
Parasitism of Fusarium lini, studies on, 951
PATEL, M. K., An improved method of isolating Pseudomonas tumefaciens Sm. and Town., 577; Study of Peronospora trifoliorum DeBy. on species of Leguminosae, 72
Pathology, plant, teaching, 739–744
Pea, footrot caused by Ascochyta sp. and some other fungi in the epicotyl of the pea, 269–276
Peas, black-leaf of, 549; garden, pod spot caused by Pseudomonas pisi, 75; pod spot, 177; resistance of, to rootrot, 459; wilt disease, 75
Peach, bacterial spot, control with sodium silicofluoride, 79–80; blossom blight, experiments at Washington, 218; blossom blight, 217; blossom blight, experiments at Fort Valley, Georgia, 220; effect of crowngall on young trees, 79; overwintering of Bacterium pruni in dead leaves of, 55–57
Peaches, ammonia injury, 73
Pear, fire blight of, 253
Pears, ammonia injury, 73
Pecan scab, 642; scab, control of, 644
Pecans, little leaf disease, 277, 282
Pennisetum glaucum, bacterial spot, 236
Pepper (Capsicum annuum L.), anthracnose of, 333–345
Peronospora, 289; parasitica, 292; parasitica, attacking cabbage heads, 365–366; trifoliorum on legumes, 72; trifoliorum, 290, 292
Peronosporales, 285–290, 291; relation of oxygen to spore germination in some species of, 285
Pestalozzia sp. causing rot of avocado, 80
Petunia violacea, inoculations with mosaic diseases, 144
Phalaris spp., susceptible to Puccinia coronata, 83–84
Phaseolus, spp., hosts for Phytomonas medicaginis **phascolicola**, 927; vulgaris, a new bacterial disease on, 915
Pholiota adiposa Fr., preliminary note on, 757–758
Phorbia, brassicae, life history, 154; fusciceps, seed-corn maggot, relation to potato blackleg, 68; fusciceps, Zett, 149
Phomopsis juniperovora, on conifers, 899
Phytolacca decandra, inoculations with mosaic diseases, 144
Phytomonas, 264; dissolvens (comb. nov.), 264, 265; flaccumfaciens, on beans, 915; phaseoli, on bean, 915; medicaginis var. **phaseolicola** n. var. on beans, description of, 923; synonym of Pseudomonas, 177
Phytopathological, notes, 429, 753; Society, see American Phytopathological Society
Physalis, heterophylla, as carrier of tomato streak or winter blight, 325; mosaic of, 431; pubescens, inoculations with mosaic diseases, 144
Physalospora malorum (Berk.) Shear, variability in, 41–46
Physiologic, forms of Colletotrichum linde-

muthianum in the Netherlands, 369; forms of Puccinia coronata, effect of alternate hosts on, 83–84; forms of Puccinia triticina, 111–114; specialization, of Fusarium lini, 976; specialization of Fusarium lini, 84–85; specialization of Puccinia triticina, 89–120; specialization of Ustilago nuda and U. tritici, 1001; specialization of Ustilago zeae and Puccinia sorghi, 84
Physiological, specialization, Melampsora lini, 199; specialization, in Ustilago zeae, 797
Phytophthora, 285–289, 290, 291, 292
Phytophthora, a species of, 285; cactorum, cause of foot-rot of Lilium candidum and Lilium pyrenaicum, 51–53; cactorum, on strawberry, 229; colacasiae, 285, 287, 288, 289, 292; infestans, 285, 289, 292; infestans, effects of low temperature on, 131–138; infestans, effects of moisture on, 135; infestans, occurrence of oospores of, 128–131; infestans, overwintering of, 121–140; infestans, saprophytism of, 122–127; mutations, 723–730; omnivera, mutations, 723–730; palmivora, 289, 292; parasitica, 289, 292; parasitica, var. rhei, 723
PIEMEISEL, FRANK JOSEPH, 662
Pineapple, fruitlet black rot of, 359–363
Pisum sativum, black leaf of, 549
PLAKIDAS, A. G., Strawberry "Yellows," a degeneration disease of the strawberry, 423–426
PLUNKETT, O. A., Mutations in fungi, 762–763
Plant pathology, international problems in, 233; teaching, 739–744
Plant virus problems, 745–751
Plasmodiophora, brassicae, 310; **tabacum** n. sp., in tobacco plants with mosaic-like symptoms, 67
Plasmopara, 289; viticola, 290, 292
Pod spot of garden peas, 182
Potato, "black dot" disease of, 23–40; blackleg, relation of seed-corn maggot, 68; blackleg, 149; blackleg of, 246; mosaic, relation to streak or winter blight of tomato, 326–330; mosaic symptoms, influence of environment on, 581; net necrosis of, 929; spindle tuber, transmission by cutting-knives and seed-piece contact, 68–69; spindle-tuber, transmission by cutting knives and seed piece contact, 299–303; spindling tuber disease of, 233; tuber rot caused by Alternaria solani, 68; method of inoculating with spindle tuber, 233; sprain or internal brown spot, 711–722
Powdery mildew, of muskmelons in the Imperial Valley of California in 1925, 1009
Prune, infection of roots by Armillaria mellea, 479
Pseudomonas, citriputeale, 235; citriputeale, in South Australia, 80; citriputeale, on avocado and citrus, 235; dissolvens, 264; **holci**, n. sp., 237; pisi, cause of pod spot of garden peas, 177; pisi, causing pod spot of garden peas, 75; pisi, cultural characteristics, 178; pisi, inoculations, 177; pisi, longevity, 179; syringae, 236; syringae, cause of bacterial disease of lilac in Europe, 236; tumefaciens, a method of isolating, 577
Pseudomosaic in beans, 731
Pseudotsuga spp. hosts for Phomopsis juniperovora, 900
Puccinia, coronata, effect of alternate hosts on physiologic forms of, 83–84; coronata II, alternate hosts of, 84; graminis, reaction to in a cross, 809–829; graminis tritici, on Berberis fendleri, 234; sorghi, infection and spore germination studies, 69; sorghi, physiologic specialization in, 84; triticina, geographic distribution of physiologic forms of, 105–111; triticina, methods of inoculation, 90–94; triticina, on wheat, 89–120; triticina, physiologic specialization of, 89–120; triticina, reaction of wheat varieties to physiologic forms of, 95–105; triticina, single-spore cultures of, 92–94; triticina, types of infection, 94–95
Pythiacystis citrophthora in avocado, 762
Pythium, aphanidermatum, cause of cottony leak of eggplant fruit, 47–50; de baryanum, 640; seedling blight and root rot of corn, 85; species, 269–270

QUANJER, H. M., Results of Dutch investigations, 310
Quebec, streak or winter blight of tomato in, 311–331
Quince, aerial galls, 78

Raspberry, Verticillium wilt of, 755–756; mosaic, masking by high temperature, 80
RAMSEY, G. B. and L. F. BUTLER, Ammonia injury of fruits and vegetables in storage, 73
RAWLINS, T. E., Cytology of root tips from sugar beets having curly-top disease, 761; see J. B. SCHERRER
REDDICK, D., Authority, 753–754
REDDY, C. S., J. R. HOLBERT and A. T. ERWIN, Sweet corn seed treatment in 1925, 65; see HOLBERT, JAMES R.
REINKING, O. A., Fusaria inoculation experiments: relation of various species of Fusaria and Colorado banana disease, 371–392
Relation, of oxygen to spore germination in some species of the Peronosporales, 285–292
Relationship, of various species of Fusaria to wilt and Colorado banana disease, 371–392
Resistance, in beets, to curly top, 87–88; in cabbage to Fusarium conglutinans, inheritance of, 87; of peas to rootrot, 459; of wheat varieties to Erysiphe graminis tritici, 90; of wheat varieties to Puccinia triticina, 95–114
Results, of Dutch investigations, 310
Rhamnus, cathartica, relation to crown rust, 84; lanceolata, relation to crown rust, 84; species, alternate hosts of Puccinia coronata II, 84; species, effect on physiologic forms of Puccinia coronata, 83–84
Rhizoctinia, 270; cause of rot in strawberry, 230; crown rot of carrots, 356–368; on potato, 755; solani, 269–276; solani on cotton, 761
Rhizopus, 254; nigricans, causing ripe rot of avocado, 80; rot of various fruits and vegetables, 254; spp., 247; spp., on avocado, 762
Rhododendron, 294, 295; caucasicum, 293, 294, 295; chrysanthum, 293, 294, 295; flavum, 295, 296; ponticum, 294, 295; rhombicum, 293, 294; smirnovii, 294, 295; sp., 293, 294, 295; ungernii, 294, 295
Rhubarb, Phytophthora on, 723–730
Rice, stem rot caused by Sclerotium oryzae, 86
RIKER, A J., and G. W. KEITT, Studies of crowngall and callus overgrowths on apple grafts, 78; Studies of crowngall and wound overgrowth on apple nursery stock, 765–809
RODENHEISER, H. A., Physiological specialization of Ustilago nuda and Ustilago tritici, 1001; see LAMBERT, E. B.
ROBERTS, J. W., and J. C. DUNEGAN, Blossom blight of peach, 217–222
Root-rot, 243, 269; of corn, caused by a Pythium, 85; resistance of peas to, 459
ROSE, D. H., Relation of strawberry fruit rots to weather conditions in the field, 229–232
ROSEN, H. R., Bacterial stalk rot of corn, 241–267; Paradichlorobenzene against root-nematode, 635; Sweet potato mosaic and its incubation period of two growing seasons, 74
ROSENDAHL, C. O., Rev. of: Winter botany, second edition, revised by WM. TRELEASE, 61–62
ROSENBAUM, JOSEPH, 663; Joseph, biography of, 895
Rot, bacterial stem, of corn, 242; bacterial stalk, of corn, 241–267; black, of pineapple fruitlets, 359–363; of crown of carrots, caused by Rhizoctonia, 367–368; dry, of gladioli, 757; of apple, caused by Botryosphaeria ribis, 45; of apple, caused by Botryosphaeria ribis f. chromegena, 45; of the apple, variability in the black rot fungus, 41–46; of potato tubers caused by Alternaria solani, 68; on strawberry caused by Rhizoctonia, 230; Rhizopus, of various fruits and vegetables, 254; white, of Allium, 697–710

Rots, strawberry, 229; strawberry, relation of weather to, 229
Rubus innominatus, mosaic masked by high temperature, 80
RUDOLPH, B. S., Verticillium wilt of tomatoes in California, 234
RUSSELL, R. C., see FRASER, W. P.
Rust, alternate hosts of Puccinia coronata II, 84; black stem rust of wheat, effect of sulfur dust, 64–65; cereal, dusting for, 64; corn, infection and spore germination studies, 69; effect of alternate hosts on physiologic forms, 82–83; of wheat, control by sulphur dust, 64; on wheat, 89–120; wheat stem, in Manitoba, 755

SANDS, D. R., Experiments for the control of onion smut, 758
SANFORD, G. B., Some factors affecting the pathogenicity of Actinomyces scabies, 525–547
Saprophytism, of Phytophthora infestans, 122–127
SAWYER, W. H., JR., see STEVENS, N. E.
Scab, of apples, 559; of apple, infection under controlled conditions, 77; of potato, 525
SCHERER, J. B., and T. E. RAWLINS, Breeding lettuce for tip-burn resistance, 764
Sclerospora, 289; graminicola on Everglade millet, 71; graminicola on corn, 85–86
Sclerotinia cepivorum, temperature studies, 697–710; cinerea, 217
Sclerotium oryzae, causing stem rust of rice, 86
SCOTT, G. A., see FRASER, W. P.
Seed, bed, controlling celery blight in, 467; treatments for control of bunt, 829–842; treatments for the control of certain diseases of dent corn, 82–83; treatment experiments for controlling stripe disease of barley, 565–576; treatment, sweet corn, 65
Seed-corn maggot, 154; life history, 154; relation to potato blackleg, 68; relation of to potato blackleg, 149
Seedling, blight, of corn, caused by a Pythium, 85; blight of corn, influence of temperature on resistance to, 82; wilt, of beans, 734
Semesan, for control of covered smut of barley, 350, 351; for control of oat smuts, 350, 351; dust, for control of wheat bunt, 349
Sequoia spp., hosts for Phomopsis juniperovora, 913
SHAPOVALOV, MICHAEL, Aspergillus decay of cotton bolls, 75; Transpiration of healthy and blighted tomato plants (Western yellow tomato blight), 763; What is "sore-shin?", 761
Setaria viridis, host of Selerospora graminicola, 85–86
SEWELL, M. C., see MELCHERS, LEO E.
Single-spore, culture, of Puccinia triticina, 92–94; isolation simplified, 763
SIMMONDS, P. M., see FRASER, W. P.
Singapore, banana wilt disease on, 369–370
Smut, covered, of barley, experiments in the control of, 347–351
Sodium silicofluoride, as a control for peach bacterial spot, 79–80
SLAGG, C. M., New and unusual diseases and injuries of tobacco, 758
SMITH, C. O., Similarity of bacterial diseases of avocado, lilac, and citrus in California, 235–236
SMITH, M. A., Infection and spore germination studies with Puccinia sorghi, 69
Smut, head, of sorghum, relation of soil temperature and soil moisture to development of, 353–357; kernel, of sorghum, strain infecting milo and hegari, 85; of barley, 1001; on corn, 979; of onion, control of, 758; of onion, nuclear phenomena and life history, 69; of western rye grass, 473; of wheat, 1001
Smuts, covered, of small grains, 393–411; of oats, experiments in the control of, 347–351; loose, of wheat and barley, control, 63–64
Soil, moisture influence on white rot of Allium, 697–710; relation of temperature and moisture to development of

head smut of sorghum, 353–357; temperature, influence on white rot of Allium, 697–710
Solanum, melongena, inoculations with mosaic diseases, 144; nigrum, inoculations with mosaic diseases, 144; rostratum, inoculations with tobacco mosaic, 145; tuberosum, scab of, 525
"Sore-shin," what is? 761
Sorghum, bacterial spot of, 236; head smut of, relation of soil temperature and soil moisture to development of, 353–357; kernel smut, strain infecting milo and hegari, 85; susceptible to Sclerospora graminicola, 85–86
South Carolina, Pseudomonas pisi in, 177
SOROKIN, HELEN, The destruction of the chloroplasts in tomato mosaic, 66–67
Soybean, anthracnose, 640; brown spot of, 639; Pythium root rot of, 640
Specialization, of Puccinia triticina, 89–120
Sphacelotheca sorghi, strain infecting milo and hegari, 85
Spindle tuber, disease of potatoes, 233; of potato, transmission by cutting knives and seed piece contact, 68–69; method of inoculating potatoes, 233
Spore, germination studies with Puccinia sorghi, 69
Spot, bacterial on species of Holcus and Zea, 236
Spot-rot, of apples in storage caused by Botrytis, 485
Sprain of potatoes, 711–722
SPRAGUE, R., see HEALD, F. D., 485
Stain Technology, 579
STAKMAN, E. C., and J. J. CHRISTENSEN, Physiologic specialization of Ustilago zeae and Puccinia sorghi and their relation to corn improvement, 84; see BROADFOOT, W. C.; see CHRISTENSEN, J. J.; see LAMBERT, E. B.
Staphylococcus, 255; aureus, 255
Stem rot, of rice, caused by Sclerotium oryzae, 86
Stem rust, black, of wheat, effect of sulfur dust on, 64–65; of wheat, control by sulphur dust, 64; wheat, epidemiology of, in Manitoba, 755
STEVENS, F. L., Plant disease fungi, review of, 637; Sylloge Fungorum, review of, 429
STEVENS, N. E., and W. SAWYER, JR., The distribution of cranberry false blossom, 223–227
Stipa sp., host of Puccinia coronata, 83–84
Storage, spot-rot of apple caused by Botrytis in, 485
Strawberry, fruit rots, 229; fruit rots, relation of weather to, 229; rot caused by Phytophthora cactorum, 229; rot, caused by Rhizoctonia, 230; "yellows," 423–426
Streak, of tomato in Quebec, 311–331
Stripe, disease, of barley, 565; of barley, control, 63–64
Stuart's disease, 264
Studies, of corn gall and wound overgrowth on apple nursery stock, 765–809; of the epidemiology and control of fire blight of apple, 665–696; on epidemiology of wheat stem rust in Manitoba, 755; on the nature of the virus of tobacco mosaic, 853–872; on the reaction to stem rust in a cross between Federation wheat and Khapli emmer, with notes on the fertility of the hybrid types, 809–829; on the spot disease of cauliflower (Bacterium maculicolum), 877–884
Sudan grass, bacterial spot, 236
Sugar beets, cytology of root-tips of curly-top, 761; resistance to curly-top, 87–88
Sugar cane, cold chlorosis, 885–892; Helminthosporium sacchari on, 71
Sulphur, colloidal, for control of oat smuts, 350, 351; colloidal, for control of covered smut of barley, 350; colloidal, for control of wheat bunt, 349; dust, as a control for wheat rusts, 64; dust, effect on black stem rust of wheat, 64–65; flowers of, for control of wheat bunt, 349; fungicides on foliage, quantitative determination of, 427–428
Survey, field, as a basis for the phenological interpretation of the plant disease epidemic, 63
Sweet corn, seed treatment in 1925, 65

Sweet potato, mosaic, non-transmissibility of, 74; mosaic, incubation period, 74
Sylloge Fungorum, review of 23rd volume, 429

Take-all disease in Canada, 80–81
Taxodium spp., hosts for Phomopsis juniperovora, 900
Taxus spp., hosts for Phomopsis juniperovora, 900
Teaching, of elementary plant pathology, 739–744
TEHON, L. R., The field survey as a basis for the phenological interpretation of the plant disease epidemic, 63
TEMPLE, C. E., see JEHLE, R. A.
Temperature, effect on the behavior of Phytophthora infestans, 131–138; influence on metabolism and disease resistance in corn, 82; of soil, relation to development of head smut of sorghum, 353–357
Teosinte, susceptible to Sclerospora graminicola, 85–86
Thuja spp., hosts for Phomopsis juniperovora, 900
Thujopsis spp., hosts for Phomopsis juniperovora, 900
THUNG, T. H., Peronospora parasitica (Pers.) de By attacking cabbage heads, 365–366
Thielavia, basicola, a method of isolating, 579; root rot, of tobacco, isolation of causal organism, 579
Tilletia, tritici, seed treatments for the control of, 829–842
Tip-burn, lettuce, breeding for resistance, 764
TISDALE, W. H., Control of cereal smuts, 645; L. E. MELCHERS and H. J. CLEMMER, a strain of sorghum kernel smut which infects milo and hegari, 85
Tobacco, and related plants, new virus disease, 66; as carrier of tomato streak or winter blight, 325; mosaic, attempts to cultivate virus of, 873–876; mosaic, inhibition of infection, 67–68; mosaic, nature of virus, 853–872; mosaic, properties of infective principle, 434; mycetozoan in plants with mosaic-like symptoms, 67; new and unusual diseases and injuries, 758; virus mixtures in, 893
Tomato, mosaic, causing destruction of chloroplasts, 66–67; effect of mosaic on carbohydrate and nitrogen content, 843–852; mosaic of, 431; mosaic, properties of infective principle, 435; mosaic, relation to streak or winter blight of tomato, 326–330; streak or winter blight of, in Quebec, 311–331; transpiration of healthy and blighted plants, 763; Verticillium wilt, 234
TOMPKINS, C. M., Influence of environment on potato mosaic symptoms, 581
Transmission of potato spindle-tuber by cutting knives and seed piece contact, 299–303
Transpiration of healthy and blighted tomato plants (Western yellow tomato blight), 763
Triticum subspecies susceptible to Ophiobolus cariceti, 80–81
Tropical anthracnoses, notes on, 762

Ulmus campestris, wilt of, 613
UPPAL, B. N., Relation of oxygen to spore germination in some species of the Peronosporales, 285–292
Urocystis cepulae, nuclear phenomena and life history, 69
Uspulun, bolus, dust, for control of wheat bunt, 349; for control of oat smuts, 350, 351; for control of covered smut of barley, 350, 351
Ustilago, bromivora, smut of western rye grass, 473; levis, spore germination as affected by changes in hydrogen-ion concentration induced by carbon dioxide, 69–70; nuda, physiological specialization of, 1001; tritici, physiologic specialization of, 1001; zeae, physiologic specialization in, 84; zeae, physiological specialization and mutation in, 979

Vaccinium macrocarpum, false blossom on, 223
VAN HALTERN, FRANK, and A. T. ERWIN, A yellow resistant strain of Copenhagen market cabbage, Iacope, 72; see MELHUS, I. E.

VANTERPOOL, T. C., Streak or winter blight of tomato in Quebec, 311–331; see BULLER, A. H. R.

Venturia inaequalis, ascospore discharge of, 559; inaequalis, development of ascigerous stage in nature, 77; inaequalis, infection under controlled conditions, 77; inequalis, observation on discharge of ascospores and dispersal of conidia, 756

Verticillium, albo-atrum, in tomato, 234; dahliae, 611; wilt of maple and elm seedlings, 611; "wilt" of raspberry, 755–756; wilt, on tomatoes in California, 234; wilt, of tomatoes, 234

Virus, disease, new, of tobacco and related plants, 66; factors affecting, 753; of aster yellows, incubation period in insect host, 67; of tobacco mosaic, inhibition of infection, 67–68; mixtures that may not be detected in young tobacco plants, 893; problem, some points of view on the plant, 745–751

Viruses, studies by dilution method, 66

WALKER, J. C., Influence of soil temperature and soil moisture upon white rot of Allium, 697–710; Studies upon the inheritance of Fusarium resistance in cabbage, 87; JOHN MONTEITH, JR., and F. L. WELLMAN, A new Fusarium resistant cabbage, 72–73

WALKER, M. N., A comparative study of the mosaic diseases of cucumber, tomato and Physalis, 431

Water, effect of soaking seed on amount of smuts in oats, 350, 351; effect of soaking seed on amount of covered smut of barley, 350

Watermelon, anthracnose, control of, 641; chemical injury in transit, 73

WEBB, R. W., see MCKINNEY, H. H.

WEBER, G. F., see WESTON, W. H., JR.

WEIMER, J. L., Crown wart of alfalfa in the South, 1012; Further evidence of the non-transmissibility of the so-called sweet potato mosaic, 74

WELLMAN, F. L., Occurrence of club root on Chinese cabbage, 310; see WALKER, J. C.

Western yellow tomato blight, 763

WESTON, W. H., JR., Rev. of: Plant disease fungi, 637; and G. F. WEBER, Downy mildew (Sclerospora graminicola (Sacc.) Schroet.) on the Everglade millet (Chaetochloa magna (Griseb) Scribn.), 71

Wheat, black stem rust of, effect of sulfur dust, 64–65; bunt, experiments in the control of, 347–351; foot-rot, effect of tillage, fertilizers, and rotations on spread of, 81; leaf and stem rusts of, control by sulphur dust, 64; loose smut control, 63–64; physiologic specialization of Puccinia triticina, 89–120; Reaction to stem rust in a cross between Federation wheat and Khapli emmer, 809–829; resistance to Erysiphe graminis tritici, 90; seed treatments for the control of bunt, 829–842; stem rust, in Manitoba, 755; susceptibility of varieties and selections to loose smut, 86–87; take-all in Canada, 80–81

WHETZEL, H. H., Biography of JOSEPH ROSENBAUM, 895; see KIGHTLINGER, C. V.

WHITE, R. P., Rhizoctonia crown rot of carrots, 367–368

WILCOX, R. B., Observations on masking of raspberry mosaic by high temperature, 80

WILLAMAN, J. J., see LETCHER, HOUSTON

WILSON, E. E., see KEITT, G. W.

Wilt, bacterial, of beans, 1–22; disease of banana on the island of Singapore, 369–370; elm seedlings, 611; of cotton, 76; of peas, 75; maple seedlings, 611; Verticillium, of raspberry, 755–756

WINGARD, S. A., Black end of apple, 1012

Winter blight, of tomato in Quebec, 311–331

Winter botany, second edition, revised, by Wm. Trelease, review of, 61–62

WOLF, F. A. and S. G. LEHMAN, Brown spot disease of soybean, 639

WORONICHIN, N. N., Exobasidium causasicum Woronich., in Transcaucasia and Kamchatka, 293–297

Wound, dressing for plants, 79; overgrowth on apple nursery stock, 765–809

Yellows, a degeneration disease of strawberries, 423–426; aster, incubation period in its insect host, 67; cabbage, inheritance of resistance to, 87

Yellows—resistant Copenhagen market cabbage, 72

YOUNG, P. A., Facultative parasitism of Alternaria and some other fungi, 70; Infection phenomena of Alternaria, Diplodia, and some other fungi, 70

YOUNG, V. H., Cotton wilt studies, 76; Observations on the stem rot of rice caused by Sclerotium oryzae Catt., 86

Zea mays, 264; bacterial spot, 236

ZELLER, S. M., Nectria, Gibberella, Fusarium, Cylindrocarpon, and Ramularia on Pyrus spp. in Oregon, 623; Observations on infections of apple and prune roots by Armillaria mellea Vahl, 479

Zizyphus, lycoides, susceptible to Puccinia coronata II, 84; obtusifolia, susceptible to Puccinia coronata II, 84